

401 KAR 61:030. Existing sulfuric acid plants.

NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
Department for Natural Resources
Division of Air Pollution

Relates to: KRS Chapter 224

Pursuant to: 224.10-100

Necessity and Function: KRS 224.10-100 requires the Department for Natural Resources and Environmental Protection to prescribe regulations for the prevention, abatement, and control of air pollution. This regulation provides standards of performance for existing sulfuric acid plants.

Section 1. Applicability.

The provisions of this regulation shall apply to affected facilities associated with sulfuric acid plants commenced before the classification date defined below.

Section 2. Definitions.

As used in this regulation, all terms not defined herein shall have the meaning given them in 401 KAR 50:010. "Classification date" means August 17, 1971.

Section 3. Standard for Sulfuric Acid Mist.

No person shall cause, suffer, allow or permit the following emissions into the open air:

- (1) Sulfuric acid mist in the effluent in excess of 0.50 pounds per ton of acid produced, the production being expressed as 100 percent sulfuric acid.
- (2) A visible emission which is greater than twenty (20) percent opacity.

Section 4. Standard for Sulfur Dioxide.

No person shall cause, suffer, allow or permit the following emission into the open air: Sulfur dioxide in the effluent in excess of 27.6 pounds per ton of acid produced, the production being expressed as 100 percent sulfuric acid.

Section 5. Test Methods and Procedures.

- (1) The reference methods as defined in Appendix A of 40 CFR 60, filed by reference in 401 KAR 50:015, except as provided in 401 KAR 50:045, shall be used to determine compliance with the standards prescribed in Sections 3 and 4:
 - (a) Reference Method 8 for the concentration of sulfur dioxide and acid mist;
 - (b) Reference Method 1 for sample and velocity traverses;
 - (c) Reference Method 2 for velocity and volumetric flow rate; and
 - (d) Reference Method 3 for gas analysis.
- (2) The moisture content can be considered to be zero. For Reference Method 8 the sampling time for each run shall be at least sixty (60) minutes and the minimum sample volume shall be 1.15 dscm (40.6 dscf) except that smaller sampling times or sample volumes, when necessitated by process variables or other factors, may be approved by the department.
- (3) Acid production rate, expressed in metric tons per hour of 100 percent sulfuric acid shall be determined during each testing period by suitable methods and shall be confirmed by a material balance over the production

system.

- (4) Acid mist and sulfur dioxide emissions, expressed in g/metric ton of 100 percent sulfuric acid shall be determined by dividing the emission rate in g/hr by the acid production rate. The emission rate shall be determined by the equation $\frac{g}{hr} = \frac{QS}{c}$, where QS = volumetric flow rate of the effluent in dscm/hr as determined in accordance with subsection (1)(c) of this section, and c = acid mist and sulfur dioxide concentrations in g/dscm as determined in accordance with subsection (1)(a) of this section.

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